Claims

1. A reduction device of an industrial robot characterized in a reduction device of an industrial robot having a robot base, a rotating barrel portion, a rotating shaft and a front/rear shaft, which is the reduction device of the rotating shaft having a large gear a position of which is fixed to the robot base and a small gear brought in mesh with the large gear and axially supported in the rotating barrel portion;

wherein the large gear and the small gear are arranged at a vicinity of a rotational plane of the front/rear shaft.

2. A reduction device of an industrial robot characterized in a reduction device of an industrial robot having a robot base, a rotating barrel portion, a rotating shaft and a front/rear shaft, which is the reduction device of the rotating shaft having a small gear axially supported by the robot base and a large gear which is brought in mesh with the small gear and a position of which is fixed to the rotating barrel portion;

wherein the large gear and the small gear are arranged at a vicinity of a rotational plane of the front/rear shaft.

3. A reduction device of an industrial robot characterized in a reduction device of an industrial robot having a robot base, a rotating barrel portion, a rotating shaft and a

front/rear shaft, which is the reduction device of the front/rear shaft having a large gear a position of which is fixed to a lower arm of the robot, a small gear brought in mesh with the large gear and axially supported in the rotating barrel portion, and an up/down shaft pivotably supported axially by the lower arm;

wherein the large gear and the small gear are arranged at a vicinity of a plane passing a rotational center axis of the up/down shaft and in parallel with a rotational plane of the rotating shaft.

4. The reduction device of an industrial robot according to the invention 1, 2 or 3, characterized in including a communication hole at a center portion of the large gear.